IOWA

PROFILES IN
soil health

Don Elsbernd
Postville, Iowa
1,400 acres
Crops: corn, soybeans, alfalfa
Planting: no-till, strip-till
Covers: radishes, oats, cereal rye

unlock the SECRETS IN THE SOIL

Conservation, Profits Outweigh Crop Yields.

Growing strong crop yields is important to farmer Don Elsbernd, but the National Corn Growers Association member is more interested in protecting his natural resources and improving profit margins through soil conservation practices.

Elsbernd grows corn, soybeans and a little alfalfa hay with his son, Eric, on 1,400 acres in Allamakee and Winneshiek Counties, near Postville. He began no-tilling corn into soybean stubble about 25 years ago. Now, he no-tills all of his cropland – except for corn-on-corn – which he strip-tills.

He says it's always been his goal to produce comparable yields to farmers who conventionally till the soil, but ultimately that's not as important as being a good land steward. "Through no-till and strip-till, I am not only reducing soil erosion but also improving soil health, saving fuel and not investing as much into equipment," said Elsbernd. "No-till has also allowed me to farm more acres with less labor (than a conventional tiller might)."

Don Elsbernd plants some corn-on-corn using strip-till which provides for plenty of crop residue cover.

Eight years ago, Elsbernd went completely no-till on his crop rotations, and within the past three years began strip-tilling corn-on-corn. "We have

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evolved and adapted through the years to get to this point, learning different tricks along the way," he said.

No-till Saves Money

Low soil disturbance farming methods are also allowing Elsbernd to farm more economically. According to Iowa State University Publication FM 1698, from a 2013 Iowa Farm Custom Rate Survey:

» conventionally tilling the soil through disking, field cultivating and planting costs about **$43 per acre**,

» no-till costs about **$17 per acre**, and

» strip-till costs about **$32 per acre**.

With strip-till, Elsbernd fall bands his phosphorus and potassium fertilizer and then he applies anhydrous ammonia in the same narrow strip, just ahead of the corn planter. "Overall, I'm not where I want to be with my fertility plan," he said. "We are still tweaking it, but we do soil testing and we can variable rate our nitrogen so we are making progress."

Strip-till is historically more common on flatter ground in north central Iowa, but Elsbernd says today's precision equipment with auto steer makes it possible on all types of slopes.

After so many years no-tilling, Elsbernd says he recently realized just how much improved the soil structure becomes. He rented cropland in 2013 for the first time that was conventionally tilled for years. After the heavy amounts of spring rain, that field sustained considerable erosion compared to his no-till and strip-till fields. "There's just something different about the soil when you've been no-tilling a long time," he said. "I was extremely impressed at how well our no-till fields tolerated that rain."

Elsbernd also has terraces, filter strips, and contour buffer strips on several of his farms to reduce soil erosion and attract wildlife.

LuAnn Rolling, who has served as district conservationist for USDA's Natural Resources

NRCS District Conservationist LuAnn Rolling (left) has worked with Elsbernd for several years, helping him to perfect his cropping system, and providing technical and financial assistance for conservation along the way.

Conservation Service (NRCS) in Allamakee County for 26 years, says Elsbernd's land stewardship stood out last spring following heavy rains. "We experienced some of the worst soil erosion in the county that I have ever seen," she said. "And although there was some erosion on Don's farm, it was barely noticeable compared to many other farms in the area, and that's a credit to his management."

To further improve the health of his soils, Elsbernd is experimenting with cover crops. As a Conservation Stewardship Program (CSP) contract recipient, he chose cover crops as one of his enhancements. He aerial applied annual ryegrass and radishes in late August 2012 on 150 acres, and is growing corn on those acres this year.

This year, he is going to drill oats into soybean stubble and aerial apply cereal rye on some of his corn-on-corn, covering another 150 acres.

With a record number of cover crops grown in Iowa this year, Elsbernd is seeing a renewed focus on soil health. "The tide is turning and there is even more of a focus on soil health with equipment companies," he said. "New technology with planter equipment, for example, is helping farmers with no-till."

Don Elsbernd, Iowa

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- Don Elsbernd, landowner

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